

**CLAIMS**

What is claimed is:

1. A method of increasing realized secure sockets layer encryption and decryption connections comprising:
  - 5 monitoring at least one parameter of a server that is known to affect an ability of a device to process secure sockets layer connections;
  - calculating a secure sockets layer capacity value for the server;
  - calculating a load value for a secure sockets layer device;
  - calculating a secure sockets layer connection threshold for the server;
  - 10 setting the secure sockets layer connection threshold for the server;
  - applying the secure sockets layer connection threshold to the secure sockets layer device to be used in determining a number of connections for processing by the secure sockets layer device for the server; and
  - 15 recalculating the secure sockets layer connection threshold value for the secure sockets layer device.
2. The method of claim 1, wherein the server parameter is CPU utilization.
3. The method of claim 1, wherein the server parameter is available memory.
4. The method of claim 1, wherein the secure sockets layer capacity value of the server represents a capability of the server to process secure sockets layer connections.
- 20 5. The method of claim 1, wherein at least one of the secure sockets layer capacity value and the load value is a direct value.
6. The method of claim 1, wherein at least one of the secure sockets layer capacity value and the load value is a computation of values.

7. The method of claim 6, wherein the secure sockets layer capacity value =  $\max [(\# \text{ processors} \times \text{processor speed}/100) \times (0.7\text{-CPU utilization}), 0]$ .

8. The method of claim 1, wherein the secure sockets layer connection threshold for the secure sockets layer device is a function of both device load and server capacity.

9. The method of claim 8, wherein device load and server capacity are variable values.

10. The method of claim 8, wherein the connection threshold =  $10 \times \text{server capacity} \times \text{device CPU utilization}$ , represents the number of secure sockets layer connections that the secure sockets layer device allows a server to process.

11. A computer readable medium having computer readable instructions encoded therein to:

calculate a secure sockets layer capacity of a server;

calculate a load of a secure sockets layer device;

calculate a secure sockets layer connection threshold for the server;

set the secure sockets layer connection threshold for the server;

apply the secure sockets layer connection threshold to the secure sockets layer device;

and

recalculate the secure sockets layer connection threshold value for the secure sockets layer device.

12. The computer readable medium of claim 11, wherein the secure sockets layer capacity of the server represents a capability of the server to process secure sockets layer connections.

13. The computer readable medium of claim 11, wherein the secure sockets layer capacity is a direct value or a computation of values.
14. The computer readable medium of claim 13, wherein the secure sockets layer capacity =  $\max [(\# \text{ processors} \times \text{processor speed}/100) \times (0.7 - \text{CPU utilization}), 0]$ .
- 5 15. The computer readable medium of claim 11, wherein the load is a direct value or a computation of values.
16. The computer readable medium of claim 11, wherein the secure sockets layer connection threshold for the secure sockets layer device is a function of both device load and the secure sockets layer capacity of the server.
- 10 17. The computer readable medium of claim 16, wherein the device load and the secure sockets layer capacity are variables.
18. The computer readable medium of claim 16, wherein the secure sockets layer connection threshold determines a number of connections that the secure sockets layer device processes for the server.
- 15 19. The computer readable medium of claim 16, wherein the secure sockets layer connection threshold =  $10 \times \text{server capacity} \times \text{device CPU utilization}$ .
20. A system for providing a secure sockets layer connection within a data communication network comprising:  
a secure sockets layer encryption and decryption device;  
20 a client machine; and  
at least one server wherein the system is adapted to:  
monitor at least one parameter of a server that is known to affect an ability of the server to process secure sockets layer connections;

calculate a secure sockets layer capacity value for the server;

calculate a load value for the secure sockets layer encryption and decryption device;

calculate a secure sockets layer connection threshold for the server;

set the secure sockets layer connection threshold for the server;

5      apply the secure sockets layer connection threshold to the secure sockets layer encryption and decryption device to determine a number of connections for processing by the secure sockets layer encryption and decryption device for the server; and  
 recalculate the secure sockets layer connection threshold value for the secure sockets layer encryption and decryption device.

21.      The system of claim 20, wherein the data communication network includes at least one of an Internet or an Intranet.

22.      The system of claim 20, wherein a secure sockets layer encryption and decryption device within the data communication network includes software for performing calculations.

23.      The system of claim 20, wherein the server parameter is at least one of CPU utilization and available memory.

24.      The system of claim 20, wherein the secure sockets layer capacity value =  $\max [(\# \text{ processors} \times \text{processor speed}/100) \times (0.7 - \text{CPU utilization}), 0]$ .

25.      The system of claim 24, wherein the secure sockets layer capacity value of the server represents a capability of the server to process secure sockets layer connections.

26.      The system of claim 20, wherein the secure sockets layer connection threshold =  $10 \times \text{server capacity} \times \text{device CPU utilization}$ .

27. The system of claim 26, wherein the secure sockets layer connection threshold for the secure sockets layer device is a function of device load and server capacity, both of which are variable values.

28. The system of claim 20, wherein at least one of the secure sockets layer capacity value and the load value is a direct value.

29. The system of claim 20, wherein at least one of the secure sockets layer capacity value and the load value is a computation of values.